

## NATIONAL POULTRY IMPROVEMENT PLAN

In Missouri, those who want to sell wholesale hatching eggs or day-old poultry stock, exhibit poultry, or import poultry into the state must have their eggs and/or birds certified pullorum-typhoid free through the National Poultry Improvement Plan, or test negative for pullorum within 90 days of the regulated activity.

The National Poultry Improvement Plan (NPIP) began in the early 1930s to eliminate pullorum-typhoid from commercial poultry. Since 1992, the NPIP has been administered by the Missouri Department of Agriculture by implementing various disease programs for commercial breeders, hatcheries and other poultry facilities. The department also tests birds at county fairs, poultry shows and other events.

State law requires all poultry breeders and hatcheries selling baby poultry or hatching eggs to be pullorum free. Participating flocks in Missouri can be found in the poultry yearbook at [Agriculture.Mo.Gov](http://Agriculture.Mo.Gov).

### HOW TO PARTICIPATE

Applications to participate in the NPIP are available through the Missouri Department of Agriculture by calling (573) 751-3377. Once an application is received, the Department will contact the applicant to explain NPIP provisions and perform flock testing and inspections. Each participant in good standing is issued an approval number to be used when shipping eggs and chicks. Participation is renewed on an annual basis.

### PRACTICE BACKYARD BIOSECURITY

- Restrict access to your property and your birds
- Clean and disinfect equipment that comes in contact with your birds or their droppings (including cages and tools)
- Avoid visiting farms or other households with poultry
- Don't mix birds from a different source, species or age range
- Always buy birds from a reputable source

### DON'T HAUL DISEASE HOME

If you take birds to a fair or exhibition, keep those birds separated from the rest of your flock for at least two weeks after the event. New birds should always be kept separate from your flock for at least 30 days.



#### Missouri Poultry Health and Improvement Program

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Jefferson City, MO 65102  
(573) 751-3377

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# MISSOURI POULTRY HEALTH AND IMPROVEMENT PROGRAM

*Preventing Disease and  
Conducting Surveillance Testing*







## AVIAN DISEASES

### PULLORUM DISEASE

Few diseases are more devastating to poultry producers than pullorum. First identified in 1899, the bacteria *Salmonella pullorum* causes heavy losses in chicks and poults and decreases the productivity of adult birds. An infection that begins with a single bird can spread quickly through a flock.



**MORTALITY RATES FROM PULLORUM** can reach more than 80 percent/flock

There is no treatment or specific vaccine for pullorum; therefore, it is critical that producers practice good biosecurity once a pullorum clean flock is established.

While chickens seem to be the most natural host for pullorum, the disease can also affect turkeys, ducks, geese, quail and other birds. Pullorum is rarely found in mammals and rarely passes from one mammal to another.

**MDA Tip: purchase eggs and poultry stock from NPIP participating flocks.**

### PULLORUM TRANSMISSION

Pullorum disease is usually transmitted in the egg, from hen to offspring; but may also be spread through:

- breathing or consuming dust, down, droppings or broken eggs
- mating with an infected male
- contaminated footwear, clothing and equipment
- unsanitary building environment, nesting areas, and hatching or brooding equipment



### AVIAN INFLUENZA

Avian influenza (AI), or "bird flu," is a virus that infects domestic poultry such as chickens, turkeys, quail and geese, as well as wild birds such as shore birds and waterfowl.

AI viruses are divided into two groups, highly pathogenic (HPAI) and low pathogenic (LPAI), based on the ability of the virus to produce disease and the severity of illness it can cause. HPAI spreads rapidly and has a high death rate in birds. LPAI causes only minor illness and occurs naturally in migratory waterfowl. The concern is that some LPAI virus strains are capable of mutating into HPAI viruses.

### KNOW THE WARNING SIGNS OF AI

1. Lack of energy and appetite
2. Drop in egg production or thin (soft-shelled), misshapen eggs
3. Swelling of the head, eyelids, comb, wattles, hocks
4. Purple discoloration of the wattles, comb, legs
5. Nasal discharge, coughing, sneezing
6. Lack of coordination
7. Diarrhea
8. Sudden death without any signs

### HOW AI SPREADS

AI spreads quickly via bird-to-bird contact. AI viruses can travel on manure, egg flats, crates, farm materials or equipment, and people who have picked up the virus on their clothing, shoes or hands. Migratory waterfowl can also carry the disease.

**MDA Tip: prevent domestic poultry and waterfowl from being exposed to wild waterfowl.**